

© 2013 Heldermann Verlag
Journal of Lie Theory 23 (2013) 159–176

C. Xia

Wu Wen-Tsun Key Laboratory of Mathematics, University of Science and Technology, Hefei 230026, P. R. of China

and: School of Mathematics and Statistics, University of Sydney, Sydney, NSW 2006, Australia

chgxia@mail.ustc.edu.cn

R. Zhang

School of Mathematics and Statistics, University of Sydney, Sydney, NSW 2006, Australia
ruibin.zhang@sydney.edu.au

Unitary Highest Weight Modules over Block Type Lie Algebras $\mathcal{B}(q)$

We classify the unitary quasifinite irreducible highest weight modules over the Block type Lie algebras $\mathcal{B}(q)$ for all non-zero values of the parameter q . The algebra $\mathcal{B}(q)$ contains the Virasoro algebra as a subalgebra and thus is likely to have applications in conformal field theory.

Keywords: Block type Lie algebras, quasifinite highest weight modules, unitarity.

MSC: 17B10, 17B65, 17B68, 81R10